

I Claim:

1. A prosthesis to replace all or a portion of a cephalad portion of a natural facet joint on a vertebral body comprising
  - 5 a prosthesis body accommodating fixation to the vertebral body at or near a pedicle and without support by a lamina, and
  - an artificial facet joint structure carried by the prosthesis body adapted and configured to replace all or a portion of a cephalad portion of a natural facet joint.
2. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a cephalad portion of a natural facet joint.
- 15 3. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a cephalad portion of a natural facet joint after removal of at least some of a lamina from the vertebral body.
- 20 4. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a cephalad portion of a natural facet joint after removal of at least part of an accessory process from the vertebral body
- 25 5. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a cephalad portion of a natural facet joint after removal of at least part of a transverse process from the vertebral body.
- 30 6. A prosthesis according to claim 1 wherein the artificial facet joint structure
- 35

is adapted and configured to replace a natural articular process of a cephalad portion of a natural facet joint after removal of at least part of a pedicle from the vertebral body.

5                   7.     A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
process of a cephalad portion of a natural facet joint  
after removal of at least some of the natural articular  
10 process from the vertebral body.

                  8.     A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
process of a cephalad portion of a natural facet joint  
15 after removal of at least some of the natural articular  
process and of at least some of a lamina from the  
vertebral body.

                  9.     A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
20 is adapted and configured to replace a natural articular  
process of a cephalad portion of a natural facet joint  
after removal of at least some of the natural articular  
process and of at least some of an accessory process from  
the vertebral body.

25                   10.   A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
process of a cephalad portion of a natural facet joint  
after removal of at least some of the natural articular  
30 process and of at least part of a transverse process from  
the vertebral body.

                  11.   A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
35 process of a cephalad portion of a natural facet joint

after removal of at least some of the natural articular process and of at least part of a pedicle from the vertebral body.

5                   12. A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
process of a cephalad portion of a natural facet joint,  
and

                  wherein the prosthesis body is adapted and  
10 configured to replace at least some of a lamina of the  
vertebral body.

                  13. A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
15 process of a cephalad portion of a natural facet joint,  
and

                  wherein the prosthesis body is adapted and  
configured to replace at least some of a mamillary  
process of the vertebral body.

20                   14. A prosthesis according to claim 1  
                  wherein the prosthesis body is adapted and  
configured to replace at least some of a lamina of the  
vertebral body.

                  15. A prosthesis according to claim 1  
25                   wherein the prosthesis body is adapted and  
configured to replace at least some of a mamillary  
process of the vertebral body.

                  16. A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
30 is adapted and configured to articulate with a caudal  
portion of a facet joint of an adjoining vertebral body.

                  17. A prosthesis according to claim 1  
                  wherein the artificial facet joint structure  
is made of at least one selected prosthetic material.

35                   18. A prosthesis according to claim 17

wherein the selected prosthetic material includes polyethylene, rubber, tantalum, titanium, chrome cobalt, surgical steel, bony in-growth material, ceramic, artificial bone, or a combination thereof.

5           19. A method of replacing, on a vertebral body, all or a portion of a cephalad portion of a natural facet joint using the prosthesis defined in claim 1 to provide improved support for the spinal column, the method comprising the steps of

10           (i) removing all or a portion of a natural articular process of the cephalad portion of the natural facet joint from the vertebral body, and

            (ii) fixing the prosthesis as defined in claim 1 to the vertebral body to replace the removed portion of  
15 the natural articular process with the artificial facet joint structure.

            20. A method according to claim 19 further including a step of removing at least part of an accessory process from the vertebral body.

20           21. A method according to claim 19 further including a step of removing at least part of a transverse process from the vertebral body.

            22. A method according to claim 19 further including a step of removing at least  
25 part of a pedicle from the vertebral body.